IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants	:	John K. Alex et al.	
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APPELLANTS' REPLY BRIEF

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Sir:

In response to the Examiner's Answer dated September 1, 2010, the due date for response to which is November 1, 2010, the Appellants hereby respectfully submit this reply brief in support of the their appeal to the Board of Patent Appeals and Interferences of the Examiner's final rejection of claims 1-13 and 15-22 of the above-referenced application.

RESPONSE TO EXAMINER'S ARGUMENTS

Rebuttal to Examiner's Answer Directed Claim 7

● On page 20 of the Examiner's Answer, the Examiner states:

> In reviewing the previous responses from Appellant, it is unclear where any statement informing the Examiner that claim 7 does not recite the same as claim 1 can be found, let alone how it was "consistently informed" to the Examiner. Accordingly, it is unclear how Appellant has consistently informed the Examiner throughout prosecution that claim 7 does not recite the same as claim 1. Rather, Appellant has consistently informed the Examiner throughout prosecution that claim 7 recites the same as claim 1. It is further noted that the response filed 1/2/2009 was the response that first amended the subject matter cited by Appellant into claim 7.

However, Appellants respectfully point out that in at least the Response With Amendment filed on November 30, 2009, in which a portion of page 17 from this Respond has been copied below from the PDF available on PAIRS, the Appellants stated:

> With respect to independent claim 7, the Examiner states that independent claim 7 "lists all of the same elements of claim 1..." and applies the supporting rationale of claim 1 to claim 7. However, independent claim 7 includes additional claim elements not found in claim 1, which the Examiner has failed to give a proper examination. For example, independent claim 7 also recites:
>
>> wherein the policy definition further comprises a set of resource relationships received that only specify relationships associated with a top-most level set of resources in the set of resources, wherein the availability of one or more of the top-most level set of resources is dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources;

Appellants also held an interview with the Examiner on April 23, 2010 where the Appellants submitted a PTOL413A form along with a continuation sheet to the Examiner. The continuation sheet at point #5 stated:

5.)   To discuss the Examiner's interpretation of Eshghi with respect to claim 7. In the previous Response With Amendment the Applicants pointed out that the claim 7 is not identical to claim 1, as asserted by the Examiner and that the Examiner failed to properly address certain claim elements. The Examiner, in this Final Office Action, seems to have also failed to address these claim elements, in particular, wherein the policy definition further comprises a set of resource relationships received that only specify relationships associated with a top-most level set of resources in the set of resources, wherein the availability of one or more of the top-most level set of resources is dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources".

As can be seen, the Appellants clearly and consistently informed the Examiner that claim 7 of the presently claimed invention recited differently than claim 1.

● On page 21 of the Examiner's Answer, the Examiner further states:

The portions of claim 7 that are in question are:

1)   "wherein the policy definition further comprises a set of resource relationships received that only specify relationships associated with the top-most level set of resources in the set of resources;"

2)   "wherein the availability of one or more of the top-most level set of resources is dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources;" and

3)   "wherein the set of implicit relationships are relationships associated from the top-most level set of resources to a lower level set of resources in the set of resources."

First, it is noted that the above language fails to explicitly define the function of the reverse hierarchy. Further, the above recitations are all found within wherein clauses, where the actual steps performed by the computer instructions do not appear to directly related to the above language. Rather, the receiving step receives the policy definition, and first and second portions refer to the policy definition. The third portion refers the set of implicit relationships that are harvested. The levels do not appear to be recited anywhere outside of the three portions, nor do the three portions appear to affect the functionality of the instant claim.

According to MPEP 2106 II C, some language may raise a question as to the

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limiting effect of the language in the claim, where one of the examples explicitly listed is "wherein" clauses. The section explains that language that suggests but does not require steps to be performed does not limit the scope of a claim or claim limitation. In this case, the wherein clauses do not require any steps to be performed by the instructions, nor do the wherein clauses even modify the actual steps being performed. No action is taken based on the levels within the policy definition, nor is any action dependent on the presence of the levels. A person of ordinary skill in the art would recognize that claim 7, in as much detail as claimed, would perform the same steps with the same functionality whether the policy definition has the levels of portions 1 and 2 or not, and whether the set of implicit relationships were associated with the level sets or not. Thus, in light of MPEP 2106 II C, the portions of the instant claim argued by Appellant fail to limit the scope of the instant claim.

However, MPEP 2106 II (C) is directed to "[l]anguage that <u>suggests or makes optional</u> but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation". The three elements of claim 7 listed above further define elements of the claim. For example, the first wherein clause listed above further defines the policy definition. The second where clause listed above further defines the availability of one or more of the top-most level set of resources by stating that this availability is dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources. The third wherein clause listed above further defines the set of implicit relationships.

Also, a person of ordinary skill in the art would not "recognize that claim 7, in as much detail as claimed, would perform the same steps with the same functionality whether the policy definition has the levels of portions 1 and 2 or not, and whether the set of implicit relationships were associated with the level sets or not" as asserted by the Examiner. This is because without the wherein clauses stated above, any type of policy definition or implicit relationships could be used and the availability of a top-most level set of resources could be based on anything. However, the wherein clauses listed above further define the claim so that the policy definitions are not just any policy definitions, but are policy definitions further comprise a set of resource relationships received that only specify relationships associated with the top-most level set of resources in the set of resources. The

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"availability" is an availability dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources. The set of implicit relationships are not just any implicit relationships but are associated from the top-most level set of resources to a lower level set of resources in the set of resources. **Therefore, the above claim elements clearly further limit the scope of the claim as required by MPEP 2106 II (C).**

Rebuttal to Examiner's Answer Directed to the *Eshghi* Reference

Eshghi is directed towards a system and method for the management of services provided by a computer system. *Eshghi* teaches that an inferencing engine carries out inferencing operations on a declarative model of a service. The inferencing engine uses facts about the system stored in a fact base. A resident goal store contains declarative definitions of goals which concern availability of services and which it is desirable for the system to continue to satisfy. The service model includes definitions of events which can occur in the system and may affect availability of services, and definitions of actions which can be taken to modify the configuration of the system. *Eshghi* teaches that when an occurrence of an event defined in the service model is reported to the apparatus, the event definition is used to guide analysis of the event report and appropriate updating of the fact base.

Goals which are linked to the updated facts are then examined to assess whether the goals are still satisfied. If a goal is no longer satisfied the service model is searched for actions which can re-configure the system to enable the goal to be re-satisfied. If a goal involves information about an entity in a part of the system managed by a second, different management apparatus, the second apparatus can be requested to establish a sub-goal concerning the status of that entity. Thereafter, the second apparatus takes appropriate action, autonomously, to keep the sub-goal satisfied, and reports back only if it is unable to satisfy the sub-goal.

● The Examiner on pages 23-34 of Examiner's Answer gives a background of a finite-state machine and also states that:

> Meanwhile, the argued claim language presents a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification. Thus, the "end state" from the perspective of a person of ordinary skill in the art, when taking into account the concept of a finite-state machine, could constitute any state in a computing system. Further, the term "state," as used in the instant specification, appears to not be explicitly defined, but appears to be used consistently with the definition of the term from the perspective of a person of ordinary skill in the art, which would a the configuration of information in a program or machine.

> Eshghi discloses a system that determine facts of the system, and provides for goals for the system to perform (Eshghi: Abstract). Eshghi provides for a declarative model (policy definition) which specifies requirements which must be met for a service to be available (Eshghi: Column 2, lines 53-55). The requirements are set out in terms for the required entities and their relationships (Eshghi: Column 2, lines 55-57). Thus, the desired end state of the service being available is presented, where the requirements constitute the decision sequence that must be followed to reach the state of the service being available. It is noted that the instant claim never provides for what constitutes the decision sequence, and the decision sequence is never claimed as being followed to reach the end state, let alone any requirements as to how the decision sequence is followed

However, even in view of the finite-state machine description given by the Examiner, *Eshghi* is only determining whether a condition is true of false, i.e., whether the requirements cited by the Examiner are true of false. The sections of Eshghi cited by the Examiner above merely state "requirements", but further teachings of Eshghi show that these requirements are actually conditions. For example, *Eshghi* at col. 9, lines 64-67 clearly shows determining **A if B or C**. In other words, *Eshghi* is merely teaching that A is true if B or C. This in no way is a **decision sequence that is to be followed to reach a desired end state**. These statements of *Eshghi* do not indicate any sequence that is to be followed to reach an end state for the autonomic computing system. Stated differently, the requirements of *Eshghi* are mere conditions and do not indicate any sequence that is to be followed to reach an end state for the autonomic computing system. Accordingly, the presently claimed invention distinguishes over Eshghi for at least these reasons.

● The Examiner on pages 25-26 of the Examiner's Answer states that:

However, in Eshghi, the facts are derived from the information for the implicitly derived from the information available (Eshghi: Column 14, lines 11-12). The facts are used to carry out inferencing operations on the model (Eshghi: Abstract). Further, the goal depends on the facts (Eshghi: Column 2, lines 60-65).

Meanwhile, in the instant claim, the implicit relationships "at least indicate one or more of a set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources." Thus, the implicit relationships merely "indicate" the dependendcies and location requirements.

[...]

In Eshghi, the relationships "at least indicate" the dependencies, as the facts are derived (Eshghi: Column 14, lines 11-12), where the goal is dependent on the fact (Eshghi: Column 2, lines 60-65). Further, Eshghi discloses that location is a consideration in the implementation of management tasks (Eshghi: Column 2, lines 1015). Lacking any detail of how the implicit relationship "indicates" the dependencies and location requirements, it is apparent that Eshghi teaches the set of implicit relationships in as much detail as in the cited language of the instant claim.

[...]

However, *Eshghi* only teaches implicitly identifying <u>facts</u> that may be extracted by parsing information in section 170 of the event. These facts are therefore part of the program information and are not the same as relationships. A fact, according, to *Eshghi*, is information such as the existence and status of the print scheduler (See *Eshghi* at, for example, col. 6, lines 34-36). As can be seen, a fact in *Eshghi* is clearly not an implicit relationship that indicates one or more of a set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources. Nowhere does *Eshghi* teach that a fact has anything to do with implicit relationships and resource dependencies. Accordingly, the presently claimed invention distinguishes over *Eshghi* for at least these reasons as well. Also, as stated above, the wherein clause further defining the implicit relationships clearly further limits the scope of the claim as required by MPEP 2106 II (C). Accordingly, the presently claimed invention distinguishes over *Eshghi* for at least these reasons as well.

● The Examiner on page 27 of the Examiner's Answer states that:

The term "autonomic" can be defined as being "autonomous," which can be defined as "independent." In the case of the instant application, Appellant refers to the

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autonomic computing system as being a network of systems (Specification: Page 11, lines 4-20). Meanwhile, in Eshghi, the goals refer to goals of a computing system (Eshghi: Abstract). Eshghi is directed to a problem of managing system entities in a network (Eshghi: Column 1, lines 19-28). Thus, while each goal of Eshghi may be directed specifically towards a specific service or service entity, the goal is still a goal of the system as a whole, which is a network such as in Figure 2 of Eshghi. Further, Eshghi utilizes the word "computer system" to refer to the overall network (Eshghi: Column 4, lines 20-22 and Figure 1. The schematic view of the "computer system" is actually a view of a network.).

Thus, both Appellant's invention and Eshghi disclose a desired end state of the autonomic computing system.

● However, the goal in *Eshghi* taught is a goal for an entity of a service. For example, *Eshghi* at col. 14, line 64 to col. 15, line 2 is for a print spooler entity. If the goal, i.e., that the default print is enabled, of the print spooler cannot be satisfied, i.e., the default printer is disabled, then the default printer can be switched to another printer. Therefore, *Eshghi* is not "placing the autonomic computing system in the acceptable sub-state as a substitution for the desired end-state, wherein the acceptable sub-state becomes a new end-state in response to the substitution", but is merely re-satisfying a goal of an entity of a service model, of the entire system. **Stated differently, switching a default printer to another printer is only re-satisfying the goal a default printer being enabled and is not using an acceptable sub-state as a substitution for a desired end-state**. Accordingly, the presently claimed invention distinguishes over *Eshghi* for at least these reasons as well.

● Accordingly, the presently claimed invention, distinguishes over *Eshghi* for at least the reasons given above. Also even if the *Sankaranarayan* was combined with *Eshghi*, this combination fails to teach or suggest the subject matter discussed above.

● Therefore, in view of the remarks and arguments given above 1-13 and 15-22 distinguish over the *Eshghi* reference (and the *Sankaranarayan* reference as well). In view of the foregoing remarks and arguments the rejection of claims 1-13 and 15-22 should be reversed.

Conclusion

Accordingly, in view of the remarks and arguments, the *Eshghi* reference (and the *Sankaranarayan* reference) fails to teach or suggest all of the claimed features of the present invention. Therefore, Appellants respectfully request that the Examiner's rejections be reversed.

Respectfully submitted,

Dated: <u>November 1, 2010</u>

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